



Real Estate Transactions



This booklet series describes what private well owners can do to maintain clean, safe drinking water from their well to protect their health. This is booklet 6 in a series of 6.

Your Well Water series titles:

- 1 Is It Safe to Drink?
- 2 Fixing Bacterial Quality
- 3 Understanding Chemical Quality
- 4 Water Treatment Options
- 5 Maintaining Your Water Treatment
- 6 Real Estate Transactions

If you plan to mortgage or sell your property, you will need to have your water tested. The quality and quantity of your water will affect the value of your home.

Most mortgage companies will request proof of both bacterial quality and chemical quality of your well water.

Buyers may also request this information. They may want to sample the water themselves. They may make their offer conditional on acceptable test results.

Bacterial quality

Bacterial quality is assessed by analysing for total coliforms and *E. coli* in the sample water. Sometimes the results are given simply as present or absent. For real estate purposes, request the results as a number or count. Getting the result as a number will cost more than a presence/absence result, but it will provide information on the magnitude of the problem and help identify possible solutions.

Results that indicate the water is safe to drink may come back in a variety of formats:

- 0 colony forming units per 100 millilitres (0 CFU/100 mL)
- less than 1 colony forming unit per 100 millilitres (<1 CFU/100 mL)
- non-detect (ND)

If a number other than 0 or <1 CFU/100 mL is provided in the lab report, it means that bacteria are present in the water.

If you are the buyer, we recommend that you test for bacterial quality at three different times. One should be after a heavy rainfall, if possible. This is the time the well is most likely to have bacteria enter from surface water or nearby septic systems. You should also test at two other random times during the transaction process to verify the result. Space tests at least five days apart.

Sampling should be done by a qualified professional with no vested interest in the transaction. It is easy to get a poor result if the sample is not taken properly. The person collecting the sample should check for chlorine odour from the water. If chlorine is present, the well may recently have been shock treated for bacteria. You can also ask the seller to disclose if they have shock chlorinated the well. You should wait at least five days after treatment to take a sample.

If the water is being treated for bacteria with a water treatment system, test both the treated and untreated water. This allows you to determine both the quality of the untreated water and the effectiveness of the treatment system in place.

Chemical quality

Mortgage companies will usually request a chemical quality test for the most common harmful substances that can occur naturally in Nova Scotia water—arsenic and uranium. Some companies may request other chemical quality tests if your area is known for problems related to local geology or land use. We recommend, at minimum, that you also test for fluoride, lead, and nitrate/nitrite.

If you are buying a property with a well, we recommend that you get a complete chemistry analysis and metals scan. This will provide the information you need to assess water quality and decide on treatment options, if needed. We recommend that you use an accredited laboratory for this analysis. See *Your Well Water 3 – Understanding Chemical Quality* for more information.

Water Quantity

Water quantity is best assessed by a certified well contractor or qualified groundwater professional. They will usually conduct a short-term pump test to estimate yield. An average household of two to four people will use about 680 to 1360 litres (150 to 300 gallons) each day. Homes with greater-than-average demands will need more, such as those with multiple bathrooms, hot tubs, swimming pools, water treatment units, or groundwater heat pumps.

The quantity of water available from a well is determined by a combination of well depth, pump setting, static water level, estimated well yield, available storage, and pump characteristics. Typically, a well should be able to pump 18 to 20 litres per minute (4.0 to 4.4 gallons per minute) for one hour to meet peak demands. If it cannot, then additional cold water storage is recommended, either in the well itself or in the house.

Test Well Yield

Short-term pump tests are the best way to estimate well yield.

For accessible drilled wells in which the cap can be removed

Pump the well at a rate of 18 to 20 litres per minute (4.0 to 4.4 gallons per minute) for at least one hour. Measure water levels before and during the pump test. Turn the pump off and measure water levels for at least one more hour during the recovery period.

For inaccessible drilled wells in which the cap is buried or the wellhead is inaccessible

Pump the well at a rate of 18 to 20 litres per minute (4.0 to 4.4 gallons per minute) for at least one hour. Wait 24 hours. Pump the well again at a rate of 18 to 20 litres per minute (4.0 to 4.4 gallons per minute) for at least one hour to determine if the yield can be repeated.

For most dug wells

The well's large storage capacity makes it difficult to conduct an accurate short-term pump test. Seek professional advice. Some contractors pump the well down rapidly then monitor recovery. Others pump the well more than once. Recovery may take 24 hours or more.

Check Well and Pump Installation Reports

Another source of information is the original well and pump installation reports, if available. These can give well depth, casing length, static (natural non-pumping) water level, yield, and geology. For drilled wells, the report gives the driller's estimate of yield at the time the well is completed. For dug wells, the estimate may reflect only the rate at which the well was pumped, not the actual yield. Note that yield may have changed since the well was constructed.

If you know the name of the well driller or pump installer, contact them directly for reports. You can also apply to Nova Scotia Environment to search their records, for a fee. You need the name of the person for whom the well was constructed, approximate year, and well location (address, lot number).

Interpret the data

To interpret the data collected from tests and reports, you need a certified contractor or qualified professional with training and experience in groundwater geology. An accurate water quantity assessment will help you make good decisions about your water supply.

More information on water quantity requirements is provided in our publication *Before You Construct a Water Well* <www.gov.ns.ca/nse/water/docs/ConstructWell.pdf>

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This information has been prepared by Nova Scotia Environment.
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